



TCE: Revised Toxicity Assessment & Impact on Superfund Vapor Intrusion Assessments

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Highlights TCE Toxicity

Toxicity Re-Assessment Results

- “**Carcinogenic** to Humans” – previously “Probable” carcinogen
 - Continue to be regulated as a carcinogen
- Cancer Potency **higher**
 - ~ 3-times higher re: vapor intrusion
- **Non-cancer effects** of greater concern



Cancer Risk

Lifetime Cancer Risk – TCE Inhalation:

- EPA Protective Risk Range (Superfund):
 - 1 in one-million to 100 in one-million increased chance of developing cancer
- TCE: **0.4 – 43 $\mu\text{g}/\text{m}^3$**
- Residential exposure:
 - 24 hours/day, 350 days/year, 30 years exposure

● ● ● | Non-Cancer Toxicity

Non-cancer Effects of TCE:

- Toxicity of the immune system
- Developmental: potential for heart defects in newborns
- Inhalation reference concentration:
 - Reference concentration (RfC): **2 $\mu\text{g}/\text{m}^3$**

● ● ● Implications – Vapor Intrusion

TCE Protective Risk Range - Inhalation:

- Indoor air VI exposures
- New range: **0.4 – 2 $\mu\text{g}/\text{m}^3$**
 - 1 in one-million increased chance of developing cancer – increased chance of an effect on the immune system or newborns from maternal exposure
 - Old range: 1.2 to 10 $\mu\text{g}/\text{m}^3$



Thank You

QUESTIONS?